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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/536,486	05/20/2005	Knut Halberstadt	2002P1453WOUS	6823

7590 09/22/2006

Siemens Corporation
Intellectual Property Department
170 Wood Avenue South
Iselin, NJ 08830

EXAMINER

LAVILLA, MICHAEL E

ART UNIT	PAPER NUMBER
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1775

DATE MAILED: 09/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/536,486

Applicant(s)

HALBERSTADT ET AL.

Examiner

Michael La Villa

Art Unit

1775

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 17-35 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 17-35 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 May 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>20050520</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Specification

1. The Substitute Specification filed with the Preliminary Amendment of 20 May 2005 has been entered. It is presumed that the only differences between the Substitute Specification and the originally filed Specification are the changes to the Specification proposed in the Preliminary Amendment of 20 May 2005.
2. Applicant is reminded of the proper content of an abstract of the disclosure.
3. A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure. If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement. In certain patents, particularly those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof. If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.
4. The abstract should not refer to purported merits or speculative applications of the invention and should not compare the invention with the prior art.
5. Where applicable, the abstract should include the following:
 - a. if a machine or apparatus, its organization and operation;
 - b. if an article, its method of making;
 - c. if a chemical compound, its identity and use;
 - d. if a mixture, its ingredients;
 - e. if a process, the steps.
6. Complete revision of the content of the abstract is required on a separate sheet.

7. The abstract of the disclosure is objected to because the provided text does not characterize the claimed invention. Correction is required. See MPEP § 608.01(b).

Claim Objections

8. The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).
9. Misnumbered claims 13-31 been renumbered as Claims 17-35, respectively.***Claim Rejections - 35 USC § 112***
10. The following is a quotation of the second paragraph of 35 U.S.C. 112:
11. The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
12. Claims 17-35 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
13. Regarding Claims 17 and 31, in the penultimate line, it is unclear what is represented by "M" in the formula "McrAlY." It is unclear what is meant by the phrase "and the outer layer has been applied to the particles." Is the antecedent basis of the phrase, "the particles," the particles of the "outer layer"? If so, it is unclear how a layer is to be applied to itself.

14. Regarding Claims 18 and 32, it is unclear what is meant by the phrase “wherein a further layer is applied to the coarse particles prior to application of the outer layer.” Since the outer layer comprises the coarse particles, it is unclear what structure is being claimed and what composition is required for each layer. Is the “further layer” part of the “outer layer”? Are the “particles of coarse grain size” part of the “outer layer,” or not?
15. Regarding Claims 19, 20, 33, and 34, it is unclear what is meant by the phrase “in that.” Is the phrase superfluous? What is the antecedent basis of “that”?
16. Regarding Claims 19 and 33, it is unclear whether the “particles of medium grain size” are MCrAlY particles.
17. Regarding Claims 20 and 34, it is unclear whether the “particles of fine grain size” are of MCrAlY composition of the intermediate layer, or not necessarily.
18. Regarding Claims 20 and 34, it is unclear whether the claimed diameter is “less than 22 microns” or “between 8 and 22 microns.”
19. Regarding Claim 28, it is unclear what is meant by the phrase “the level.” Is this a weight percentage in the intermediate layer? Is it a size specification?

Claim Rejections - 35 USC § 102

20. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:
21. A person shall be entitled to a patent unless –
22. (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
23. Claims 17, 18, 20-26, and 28-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Itoh et al. USPN 5,579,534. Itoh et al. teaches coating a superalloy substrate with a MCrAlY intermediate layer and an outer layer of coarse-grained MCrAlY and ceramic. See Itoh et al. (col. 9, line 3 through col. 10, line 58; and col. 12, line 3 through col. 13, line 35).

Claim Rejections - 35 USC § 103

24. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
- i. A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
25. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:
26. Determining the scope and contents of the prior art.
27. Ascertaining the differences between the prior art and the claims at issue.

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28. Resolving the level of ordinary skill in the pertinent art.
29. Considering objective evidence present in the application indicating obviousness or nonobviousness.
30. Claims 27, 31, 32, 34, and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Itoh et al. USPN 5,579,534 in view of Khan EP 1 260 608 A1. Itoh et al. teaches coating a superalloy substrate with a MCrAlY intermediate layer and an outer layer of coarse-grained MCrAlY and ceramic. See Itoh et al. (col. 9, line 3 through col. 10, line 58; and col. 12, line 3 through col. 13, line 35). Itoh et al. does not exemplify a gas turbine part as the substrate, but Itoh et al. teaches that these laminates are appropriate for high temperature environments. Khan teaches laminates of analogous component layers, to those of Itoh et al., which laminates are used as gas turbine parts, a quintessential high temperature environment. See Khan (paragraphs 13-18). It would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the protection scheme of Itoh et al. with a gas turbine part since the scheme is tailored for high temperature protection and the component layers are typical of gas turbine parts.
31. Claims 17, 18, 20-32, 34, and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Khan EP 1 260 608 A1. Khan teaches coating a superalloy substrate with a MCrAlY intermediate layer and an outer layer of coarse-grained MCrAlY. See Khan (paragraphs 13-18). Khan may not exemplify MCrAlY coarse grains of the claimed size, but suggests that

effective coatings may be comprised of grains of the claimed size. It would have been obvious to one of ordinary skill in the art at the time of the invention to fabricate the outer layer coating of Khan with MCrAlY grains of the claimed size, as Khan teaches that effective articles may be formed with grains of this size. Khan teaches forming alumina and applying a TBC to this outer layer.


Conclusion

32. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael La Villa whose telephone number is (571) 272-1539. The examiner can normally be reached on Monday through Friday.
33. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer McNeil can be reached on (571) 272-1540. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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34. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Michael La Villa
17 September 2006


MICHAEL E. LAVILLA PH.D.
PRIMARY EXAMINER